

7. STUDY AND EVALUATION SCHEME FOR DIPLOMA PROGRAMME IN MECHATRONICS

FIRST SEMESTER

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
		Hrs/week			Theory	Practical	Written Paper		Practical		
		L	T	P	Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs	
1.1*	Communication Skills - I	3	-	2	25	25	100	3	50	2	200
1.2*	Applied Mathematics - I	5	-	-	50	-	100	3	-	-	150
1.3*	Applied Physics – I	4	-	2	25	25	100	3	50	3	200
1.4*	Applied Chemistry – I	3	-	2	25	25	100	3	50	3	200
1.5*	Basics of Information Technology	-	-	4	-	50	-	-	100	3	150
1.6*	Engineering Drawing - I	-	-	6	-	50	100	3	25 (Viva)	2	175
1.7*	General Workshop Practice - I	-	-	6	-	50	-	-	+100	3	150
# Student Centred Activities		-	-	3	-	25	-	-	-	-	25
Total		15	-	25	125	250	500	-	375	-	1250

* Common with other diploma programmes

+ Includes 25 marks for Viva-voce

Student Centred Activities will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.

SECOND SEMESTER (MECHATRONICS)

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
		Hrs/week			Theory	Practical	Written Paper		Practical		
		L	T	P	Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs	
2.1*	Communication Skills – II	3	-	2	25	25	100	3	50	2	200
2.2*	Applied Mathematics - II	5	-	-	50	-	100	3	-	-	150
2.3*	Applied Physics – II	4	-	2	25	25	100	3	50	3	200
2.4*	Applied Chemistry – II	3	-	2	25	25	100	3	50	3	200
2.5**	Applied Mechanics	3	-	2	25	25	100	3	50	3	200
2.6*	Engineering Drawing - II	-	-	6	-	50	100	3	25 (Viva)	2	175
2.7*	General Workshop Practice - II	-	-	6	-	50	-	-	+100	3	150
# Student Centred Activities		-	-	2	-	25	-	-	-	-	25
Total		18	-	22	150	225	600	-	325	-	1300

* Common with other diploma programmes

** Common with diploma programme in Civil Engineering

+ Includes 25 marks for Viva-voce

Student Centred Activities will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.

THIRD SEMESTER (MECHATRONICS)

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
		Hrs/week			Theory	Practical	Written Paper		Practical		
		L	T	P	Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs	
		3.1	Manufacturing Processes-I	3	-	9	25	50	100	3	
3.2	Mechanical Engineering Fundamentals	4	-	-	25	-	100	3	-	-	125
3.3	Electrical Engineering Fundamentals	3	-	3	25	25	100	3	50	3	200
3.4+	Computer Programming and Application	2	-	4	25	25	100	3	50	3	200
3.5	Analog Electronic Devices	4	-	3	25	25	100	3	50	3	200
Student Centred Activities#		-	-	5	-	25	-	-	-	-	25
Total		16	-	24	125	150	500	-	250		1025

+ Common with diploma programme in Electronics and Communication Engineering.

Student Centred Activities will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.

FOURTH SEMESTER (MECHATRONICS)

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
		Hrs/week			Theory	Practical	Written Paper		Practical		
		L	T	P	Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs	
4.1	Digital Electronics	3	-	2	25	25	100	3	50	3	200
4.2	DC and AC Machines	4	-	2	25	25	100	3	50	3	200
4.3 +	Instrumentation	3	-	2	25	25	100	3	50	3	200
4.4	Electrical and Electronic Instrumentation and Measurement	3	-	3	25	25	100	3	50	3	200
4.5 *	Hydraulic and Pneumatic Systems	4	-	2	25	25	100	3	50	3	200
4.6	Mechatronics – Design and Drawing	-	-	6	-	50	-	-	50	3	100
Student Centred Activities #		-	-	6	-	25	-	-	-	-	25
Total		17	-	23	125	200	500	-	300	-	1125

+ Common with diploma programme in Electronics and Communication Engineering.

* Common with diploma programme in Production Engineering

Student Centred Activities will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.

Industrial Training - After examination of 4th Semester, the students shall go for training in a relevant industry/field organization for a minimum period of one month and shall prepare a diary. It shall be evaluated during 5th semester by his/her teacher for 50 marks. The students shall also prepare a report at the end of training and shall present it in a seminar, which will be evaluated for another 50 marks. This evaluation will be done by HOD and lecturer incharge – training in the presence of one representative from training organization.

FIFTH SEMESTER (MECHATRONICS)

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
		Hrs/week			Theory	Practical	Written Paper		Practical		
		L	T	P	Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs	
Industrial Training		-	-	-	-	50	-	-	50	3	100
5.1 **	CNC Machines and Automation	3	-	2	25	25	100	3	50	3	200
5.2 +	Power Electronics	3	-	3	25	25	100	3	50	3	200
5.3 *	Employability Skills – I	-	-	2	-	25	-	-	50	3	75
5.4 *	Environmental Education	3	-	-	25	-	100	3	-	-	125
5.5	Embedded Systems	4	-	3	25	25	100	3	50	3	200
5.6	Process Control and Data Communication	3	-	-	25	-	100	3	-	-	125
5.7	Manufacturing Processes - II	3	-	6	25	50	100	3	75	3	250
Student Centred Activities#		-	-	5	-	25	-	-	-	-	25
Total		19	-	21	150	225	600	-	325	-	1300

* Common with other diploma programmes

** Common with Diploma programme in Mechanical Engineering

+ Common with diploma programme in Electronics and Communication Engg.

Student Centred Activities will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.

SIXTH SEMESTER (MECHATRONICS)

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
		Hrs/week			Theory	Practical	Written Paper		Practical		
		L	T	P	Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs	
6.1	Industrial Automation	3	-	3	25	25	100	3	50	3	200
6.2 +	Robotics	3	-	3	25	25	100	3	50	3	200
6.3 **	Inspection and Quality Control	4	-	2	25	25	100	3	50	3	200
6.4 *	Entrepreneurship Development and Management	3	-	-	25	-	100	3	-	-	125
6.5 *	Employability Skills – II	-	-	2	-	25	-	-	50	3	75
6.6	Mechanisms and Machines	3	-	-	25	-	100	3	-	-	125
6.7	Project Work	-	-	9	-	100	-	-	100	3	200
Student Centred Activities #		-	-	5	-	25	-	-	-	-	25
Total		16	-	24	125	225	500	-	300	-	1150

+ Common with diploma programme in Mechanical Engineering (CAD, CAM Design and Robotics)

* Common with other diploma programmes

** Common with Diploma programme in Mechanical Engineering

Student Centred Activities will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.